

REMARKS

Applicant has amended the application as filed and as amended by the March 2008 Amendment to remove any non-idiomatic English in the specification and to add an abstract which was not in the application as filed or as amended by the March 2008 Amendment. Applicant submits that none of the amendments made to the substitute specification attached hereto in both clean and marked up versions contain new matter as all changes are fully supported by the application as filed.

Applicant has amended independent claim 7 to change "inverse" to "inversely proportional". Applicant submits that this amendment does not introduce new matter as it is fully supported by the only drawing figure in the application as filed and the text of the application as filed that describes that figure. Applicant believes for the reasons given below that this amendment overcomes the rejection of claims 7-12 under the second paragraph of 35 U.S.C. 112.

Applicant has added new claims 13-18. Applicant submits that these claims do not add new matter as they are fully supported by the application as filed.

New independent claim 13 says that the method adjusts in response to the determined instantaneous signal-to-noise ratio of the power provided by the supply so that the supply supplies less power when the instantaneous signal-to-noise ratio is high and more power when the instantaneous signal-to-noise ratio is low. New claims 14-18 depend on new independent claim 13.

Applicant has also added new claims 19-25. Applicant submits that these claims do not add new matter as they are fully supported by the application as filed.

New independent claim 19 says that the method adjusts in response to the determined instantaneous signal-to-noise ratio of the power provided by the supply so that more power is supplied by the supply when the instantaneous signal-to-noise ratio is low than is supplied by the supply when the instantaneous signal-to-noise ratio is high. New claims 20-25

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depend on new independent claim 19.

The Rejections of the Claims

1. 35 U.S.C. 112

The examiner has rejected claims 7-12 under the second paragraph of 35 U.S.C. 112. The examiner has said that it is not understood how in independent claim 7 "power is supplied inverse to said instantaneous signal-to-noise ratio". The examiner says that this could mean that the polarity of the power is inverted or that the strength of the power is inverted. The examiner further says that it is assumed that what is meant is that the power goes down when the noise is lower and the power goes up when the noise is higher.

As is shown in the only drawing figure and described in the application as filed, when the noise is lower the instantaneous signal to noise ratio increases and when the noise is higher the instantaneous signal to noise ratio decreases. Applicant has amended claim 7 to change "inverse" to "inversely proportional". Applicant submits that reciting in amended claim 7 that supplying power inversely proportional to that ratio would be understood from the application as filed to mean that the supplied power goes down when that ratio increases and the supplied power goes up when that ratio decreases. The only drawing figure as filed shows that inverse relationship. Further, the Random House Webster's Unabridged Dictionary Second Edition defines "inverse" as "containing terms of which an increase in one results in a decrease of another. A term is said to be in inverse proportion to another term if it increases (or decreases) as the other decreases (or increases)." This definition is attached hereto as Exhibit A. See also the definition on the same page for "inversely".

Therefore, applicant submits that amended claim 7 and claims 8-12 dependent thereon do particularly point out and distinctly claim the subject matter which applicant regards as his invention.

2. 35 U.S.C. 103

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The examiner has rejected independent claim 7 and claims 8-12 dependent thereon as unpatentable over previously cited U.S. Patent No. 4,969,363 (Mochizuki) in view of newly cited U.S. Patent 6,611,770 (O'Donnell et al.) hereinafter "O'Donnell".

In support of this rejection of independent claim 7 the examiner says that Mochizuki:

a. teaches with reference to column 5, lines 57-68 the adjusting in response to a conductivity signal the power provided by the supply so that the power is supplied inverse to the instantaneous signal to noise ratio. This passage says that the conductivity signal is determined and when the conductivity decreases below a predetermined value the microcomputer causes an increase in the excitation voltage (col. 5, lines 57-63) and as a result the output signal is increased in proportion to the excitation voltage therefore improving the S/N ratio (col. 5, lines 64-65). Thus there is no teaching in Mochizuki that:

(i). the power provided by the power supply is adjusted in response to the determined instantaneous S/N ratio so that the power is supplied inversely proportional to that ratio as called for by amended independent claim 7; or

(ii). the power supply supplies less power when the instantaneous signal-to-noise ratio is high and more power when the instantaneous signal-to-noise ratio is low as called for in new independent claim 13; or

(iii). the power provided by the supply is adjusted so that more power is supplied by the supply when the instantaneous signal-to-noise ratio is low than is supplied by the supply when the instantaneous signal-to-noise ratio is high as called in new independent claim 19.

b. does not explicitly state the power is supplied inversely in response to the signal to noise ratio. Applicant agrees with the examiner but respectfully notes that independent claims 7, 13 and 19 each call for an "instantaneous signal-to-noise ratio" (emphasis added) that is determined from the signal that is representative of the flow rate.

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The examiner then says that Mochizuki does state that the power is inversely supplied in response to the conductivity signal and that O'Donnell states that the conductivity signal corresponds to the signal to noise ratio.

All of the independent claims call for the determination of the instantaneous signal to noise ratio and the use of that instantaneous ratio in the manner set forth in those claims. Each and every word used in a claim must be taken into account.

The examiner says that it would have been obvious at the time of the present invention to modify Mochizuki to include the signal to noise ratio of O'Donnell.

Assuming arguendo that the examiner is correct, that combination does not arrive at what is taught and claimed by applicant in amended independent claim 7 and new independent claims 13 and 19 as the signal to noise ratio of O'Donnell is not the instantaneous signal to noise ratio recited in those claims. The examiner does not say that Mochizuki and O'Donnell state anywhere that the instantaneous signal to noise ratio is determined and it is that ratio which is used in the present invention to determine if the power supplied should be increased or decreased.

Therefore applicant submits the independent claim 7 as amended herein and claims 8-12 dependent thereon as well as new claims 13-18 and 19-24 are not obvious to one of ordinary skill in the art from the combination of Mochizuki and O'Donnell set forth by the examiner.

Applicant submits that claims 7-24 are allowable over the art of record.

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Petition and Fee For Extension of Time

Applicant also includes herewith a Petition and Fee For Extension of Time asking that the period to respond to this Action be extended to four months from the date of the mailing of the Action viz., October 13, 2008. As is set forth in the Request For Continued Examination (RCE) Transmittal to which this Amendment is attached the required fee is to be charged to Deposit Account No. 05-0877.

Respectfully submitted,

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